BEBR

FACULTY WORKING
PAPER NO. 1030

Keynes in Retrospect

Hans Brems

College of Commerce and Business Administration
Bureau of Economic and Business Research
University of Illinois, Urbana-Champaign

FACULTY WORKING PAPER NO. 1030

College of Commerce and Business Administration

University of Illinois at Urbana-Champaign

March 1984

Keynes in Retrospect

Hans Brems, Professor
Department of Economics

Keynes in Retrospect

Hans Brems, Professor
Department of Economics

Abstract

A dozen leading economists reviewed the General Theory in major journals--none with enthusiasm. The enthusiasm came later, and younger members of the profession provided it. For one-third of a century Keynes was to influence both theory and public policy more profoundly than any economist since Smith. Already at the climax of such influence, in 1956, Hicks expressed "the feeling that the world of the fifties ... may be Keynesian in its policies, but it is not Keynesian in its working."

The article briefly summarizes Keynes's theoretical structure and discusses its realism--benefiting from the hindsight of half a century that took us from the Great Depression to the Great Inflation.

HANS BREMS
99 Commerce West
1206 S. Sixth Street
Champaign, IL 61820

KEYNES IN RETROSPECT

1. Say's Law

The question to which Keynes's General Theory offered an answer was as old as economic theory itself: under flexible prices and money wage, interest, and exchange rates will a capitalist economy left to itself generate an aggregate demand sufficient to fully utilize available resources?

Say's [1803 (1830)] affirmative answer offers a convenient point of departure for Keynes's negative answer. Say's Law came in two parts. The first part is noncontroversial and consists of the national product-national income identity: generation of product is generation of value added, and value added is somebody's earnings. Consequently money national income defined as aggregate earnings arising from current production is identically equal to national product defined as the market value of physical output. Thus generated, does income become demand? The second part of Say's Law is controversial and consists of the statement that the savings, import, and tax leakages will

always be stopped by investment, export, and government expenditure, respectively, so income does become demand.

General Theory concentrated on the savings leakage, assumed a closed economy, and said nothing about fiscal policy--a subject taken up five years later by Hansen (1941).

2. The Savings Leakage

Income saved does not directly demand domestic output. Will the leakage be stopped by a price mechanism? Specifically will a well-functioning capital market exist in which a flexible rate of interest serves as an equilibrating variable between saving and investment--as Turgot [1769-1770 (1922: 74)] had suggested and Smith [1776 (1805: 78-79)] repeated?

Keynes (1936) did not think so. The savings leakage would be stopped alright, but income rather than interest would be the equilibrating variable. Income would always adjust until the amount of it saved was no more and no less than what could be invested. How did Keynes eliminate the rate of interest as an equilibrating variable?

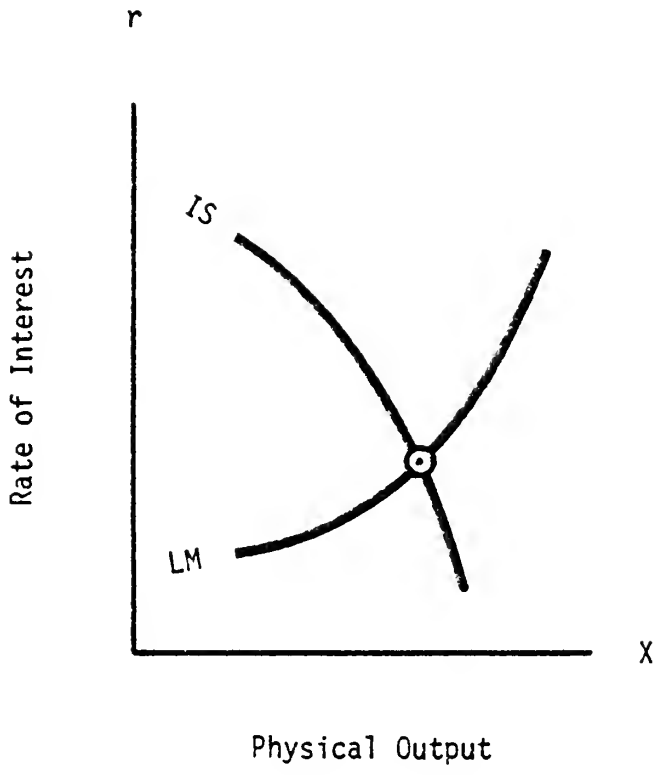

Figure V-1. A Keynesian Interest-Output Equilibrium Found by Intersecting IS and LM Curves

3. The Rate of Interest Not Equilibrating Savings and Investment

As Patinkin (1976: 99) observed, Keynes always believed that his rate of interest equilibrated the supply of and the demand for money but never savings and investment. Income took care of savings and investment!

Such tidy compartmentalization misunderstands the nature of general equilibrium--but Keynes's tradition was Marshallian partial equilibrium rather than Walrasian general equilibrium. Normally all equilibrating variables must help satisfy all equilibrium conditions. That the Keynesian system is no exception is most easily seen from the celebrated IS-LM diagram.

Such a diagram, shown in figure V-1, has two equilibrating variables: the rate of interest r plotted on the vertical axis and physical output X plotted on the horizontal one. The diagram also has two equilibrium conditions.

The first equilibrium condition is that supply of and demand for goods are equal, and the IS curve is the locus of all interest-output combinations satisfying that condition. Physical investment is sensitive to the rate of interest and is the higher the lower the rate of interest. Physical consumption is sensitive to output and is the higher the higher the physical output and with it real income. As a

result, aggregate demand for goods will be high at a low rate of interest and a high output. In other words the IS curve is a negatively sloped one.

The second equilibrium condition is that supply of and demand for money are equal, and the LM curve is the locus of all interest-output combinations satisfying that condition. Demand for money is sensitive to the rate of interest and is the higher the lower the rate of interest. Demand for money is also sensitive to output and is the higher the higher the output to be transacted. The LM curve is drawn for a given money supply. As a result, at a high rate of interest--forcing people to economize with their money holdings--such a given money supply will go farther and transact a higher output than it could have done at a low rate of interest. In other words the LM curve is a positively sloped one.

Complete equilibrium must satisfy both equilibrium conditions, and only the intersection point between the IS and LM curves will do that. In other words, both equilibrating variables help satisfy <u>both</u> equilibrium conditions, and Keynes's neat compartmentalization of his own system was a misunderstanding.

4. The Rate of Interest Weak As an Equilibrating Variable: The Short Run

There was, however, more to Keynes than his misunderstanding the nature of his own general equilibrium. His IS and LM curves could have such special forms that the rate of interest would not be of much help in stopping the savings leakage.

First, due to a low interest elasticity of investment at low interest rates it would become increasingly difficult to encourage additional investment by depressing the interest rate. The lower end of our IS curve would become nearly vertical! And, second, due to a high interest elasticity of the demand for money at low interest rates it would also become increasingly difficult to depress the interest rate by expanding the money supply. The lower end of our LM curve would become nearly horizontal! All in all, investment would have little give in it, and saving would have to adjust to it via Keynes's income mechanism. Indeed, as Kaldor (1966) put it: "The whole dispute between Keynesian and non-Keynesian theories is whether investment determines savings, or vice versa."

How realistic are such special forms of the IS and LM curves? Of the low interest elasticity of investment Keynes himself may have been less convinced than were some of his followers. To the high interest elasticity of his demand for money he (1936: 207) referred as a

"possibility". However that may be, later empirical work from Bronfenbrenner and Mayer (1960) to Barth, Kraft, and Kraft (1976) has not confirmed it.

5. Post-Keynesians: The Profits Share As a Long-Run Equilibrating Variable

Keynes himself was preoccupied with the short run and attempted neither to trace the effect of investment upon physical capital stock, to use a production function relating the flow of physical output to physical capital stock, nor to optimize the latter. Indeed his model never mentioned physical capital stock.

Could his short-run model be extended to the long run and still consider investment as determining savings rather than the other way around? Post-Keynesians like Robinson (1956) and Kaldor (1957) made the attempt. By making the capital coefficient a technological constant and assuming steady-state growth they could treat the investment fraction of output as autonomous and let the savings fraction of output adjust to it. Now according to the post-Keynesians savings came solely out of profits. The only way left for the savings fraction to adjust, then, would be for the profits share of income to adjust.

Thus, by extending a Keynesian adjustment of saving to an autonomous investment from the short to the long run, Robinson-Kaldor had

salvaged a Keynesian tradition. But had they also simulated the real world? In the real world will distributive shares adjust as Robinson-Kaldor say they should? Or will the capital coefficient adjust as neoclassicists say it should? The distributive shares are practically the same in all industrial economies. By contrast, capital coefficients and savings fractions differ strikingly among them. The United States has both the lowest capital coefficient and the lowest savings fraction--as neoclassical theory would suggest.[1]

So far we have mentioned neither prices nor money wage rates. Could they conceivably be equilibrating variables stopping a savings leakage?

6. Price and Wage Flexibility Equilibrating Savings and Investment Via a Real-Balance Effect upon Consumption

Let there be excess supply in the labor market in the form of unemployment. Let price and money wage rates be flexible and responding to such excess supply, then price and the money wage rate fall in the same proportion, so the real wage rate and with it the supply of labor is unaffected. But the demand for labor is affected. The declining price will be raising the real value of money balances--the more so the farther price declines. Modify the Keynesian consumption

function by adding such real balances to it and give them a chance to stimulate consumption. Then price will keep declining until the real-balance effect has stimulated demand enough to restore full employment. The stimulus is the result of adding real wealth to the consumption function and will play its role even when the rate of interest can play no role.

The real-balance effect was introduced by Pigou (1943, 1945) and Patinkin (1956). In Haberler's (1952: 241) judgment, such a real-balance effect "removes the narrow remaining base of...static competitive underemployment equilibrium"--and may in that sense be seen as a modern rehabilitation of Say's Law. But the real-balance effect was no part of Keynes's own system.

7. Price and Wage Flexibility Equilibrating Savings and Investment Via an Interest Effect upon Investment

By contrast, Keynes's own price and wage flexibility worked *via* the rate of interest rather than *via* consumption. Prices and money wage rates falling in the same proportion would leave wage earners no worse off and entrepreneurs no better off in real terms. Keynes's goods-market equilibrium was a flow equilibrium ignoring all stocks such as real balances. To him, then, everything in the goods market would

remain unaffected. But falling prices and money wage rates at unaffected physical output would reduce the transaction demand for money, hence release money for asset holding, and asset holders would hold it only at a reduced rate of interest. The reduced rate of interest would stimulate investment: by the detour of price and wage flexibility we are back at the rate of interest equilibrating saving and investment.

But, then, Keynes argued, how much simpler wouldn't it be to accomplish the same thing by an expansionary monetary policy at frozen prices and money wage rates? That brings us to Keynes's labor standard of money.

8. Keynes's Labor Standard of Money

Keynes froze his money wage rate and was fond of measuring his variables in "wage units." Walras would have called his choice a choice of labor as a numéraire. Hicks (1983: 18) called it a choice of a labor standard of money.

Under such a labor standard let the monetary authorities follow Keynes and try to reduce the rate of unemployment by expanding the money supply and buying bonds in the open market. At first demand, and with it economic activity, will be stimulated. To an unforeseen stimulation of demand, goods prices may respond more readily than will the

money wage rate. Consequently at first there may be a decline of the real wage rate experienced by entrepreneurs but not yet expected by labor. That discrepancy may at first reduce the rate of unemployment. But will the labor standard hold up? Keynes assumed it to, but as Hicks (1983: 18) observed there is a crucial difference between a gold standard and a labor standard.

A gold standard not only announces the price of gold but also makes it prevail. What makes it prevail is that central banks can and will buy and sell gold in unlimited quantities at the announced price--and when they cannot do that the gold standard will break down. Central banks cannot, and labor unions will not, buy and sell labor in unlimited quantities at an announced money wage rate. A reduced rate of unemployment will put upward pressure on the money wage rate: the nonaugmented Phillips (1958) curve was born.

Strangely, Keynes had assumed labor to harbor money illusions in the sense that labor would bargain for a money, not a real, wage rate. Experience did not bear him out. Labor, too, has inflationary expectations manifesting themselves in the escalator clauses of collective agreements: the expectations-augmented Phelps (1967) version of the Phillips curve was born. As it turns out, the more completely such a curve allows for labor's inflationary expectations the more explosive the price-wage spiral will be. Keynes's labor standard had broken down.

9. A "Natural" Rate of Unemployment

Is there such a thing as a "natural" rate of unemployment below which the rate of unemployment may stay for only as long as the money supply and inflation keep accelerating, and to which the rate of unemployment would return once the monetary authorities would give up their policy of accelerating the money supply? Pre-Keynesian British economists like Cannan, Clay, and Pigou had anticipated such a concept, as Casson (1984) reports. Friedman (1968: 8) coined the term and defined it as a rate of unemployment below which excess demand for labor would push the real wage rate up, and above which excess supply would push it down. Friedman (1968: 9) emphasized that some of the forces determining the natural rate of unemployment were man-made and policy-made such as minimum-wage statutes and unemployment-compensation statutes.

Is "natural" unemployment involuntary? It may be to union members but not to union leadership. Is "natural" unemployment curable? Hicks (1983: 17) decided simply to call unemployment curable by Keynesian policies "Keynesian unemployment" and judged that since 1970 we may, for the most time, have been in a state of Keynesian "full" employment!

10. The Import Leakage

In General Theory Keynes did not discuss the import leakage but did so in other writings. The import leakage is relevant to the failure of his labor standard, and we must see how.

Income spent on import does not directly demand domestic output. Will the leakage be stopped by a price mechanism? Specifically will a well-functioning foreign-exchange market exist in which a flexible rate of exchange serves as an equilibrating variable between import and export?

Keynes's assumption of a frozen money wage rate--his labor standard--was much older than General Theory and explained his attack on Britain's 1925 return to a gold standard--"a barbarous relic"--based on pre-1914 parity. At 1925 money wage rates such a parity overvalued the pound, encouraged import, discouraged export, and made it impossible to stop the import leakage.

Keynes welcomed the devaluation of the pound in 1931 and of the dollar in 1933: they made it possible to stop the import leakage. No longer worrying about it and trusting his labor standard, Keynes could now go to work on his General Theory and write it as if his economy were a closed one.

The United States economy very nearly was one, both because of its sheer size and because the dollar became the world's reserve currency. For almost four decades to come, Americans could view their balance of payments with what became known as "benign neglect". Even the United States labor market was different: less than one-fifth of it was unionized, and Keynes's labor standard might stand a better chance here than in highly-unionized Britain. Perhaps for such reasons it was on the North American continent that advances in the Keynesian art largely took place just as it was on the European continent that advances in mathematics largely took place after Newton, as Samuelson (1983: 20-21) has suggested.

But even in the United States all good things come to an end. The 1971 floating of the dollar and the 1974 oil and food shocks were a rude awakening. For domestic and international reasons alike Keynes's labor standard had failed and could be salvaged by neither price and wage controls, "incomes policies," nor "social compacts." Half a century had taken us from the Great Depression to the Great Inflation.

FOOTNOTE

[1]An empirical comparison between post-Keynesians and neoclassicists was offered by Brems (1977) with reply by A. S. Eichner and J. A. Kregel and rejoinder by Brems in the same issue. A theoretical comparison was offered by Brems (1979).

REFERENCES

J. Barth, A. Kraft, and J. Kraft, "Estimation of the Liquidity Trap Using Spline Functions," Rev. Econ. Statist., May 1976, 58, 218-222.

H. Brems, "Reality and Neoclassical Theory," J. Econ. Lit., Mar., 1977, 15, 72-83.

_____, "Alternative Theories of Pricing, Distribution, Saving, and Investment," Amer. Econ. Rev., Mar., 1979, 69, 161-165.

M. Bronfenbrenner and T. Mayer, "Liquidity Functions in the American Economy," Econometrica, Oct., 1960, 28, 810-834.

M. Casson, Economics of Unemployment, Cambridge, Mass., 1984.

M. Friedman, "The Role of Monetary Policy," Amer. Econ. Rev., Mar., 1968, 58, 1-17.

G. Haberler, "The Pigou Efect Once More," J. Polit. Econ., June, 1952, 60, 240-246.

A. H. Hansen, Fiscal Policy and Business Cycles, New York, 1941.

J. R. Hicks, "A Sceptical Follower," The Economist, June 18, 1983, 17-19.

N. Kaldor, "A Model of Economic Growth," Econ. J., Dec., 1957, 67, 591-624.

_____, "Marginal Productivity and Macroeconomic Theories of Distribution," Rev. Econ. Stud., 1966, 33, 309-319.

J. M. Keynes, The General Theory of Employment, Interest and Money, London, 1936.

D. Patinkin, Money, Interest and Prices, Evanston, Ill., and White Plains, N.Y., 1956.

_____, "Keynes' Monetary Thought: A Study of its Development," Hist. Polit. Econ., Spring 1976, 8, 1-150.

E. S. Phelps, "Phillips Curves, Expectations of Inflation, and Optimal Unemployment over Time," Economica, Aug. 1967, 34, 254-281.

A. W. Phillips, "The Relation between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957," Economica, Nov. 1958, 25, 283-299.

A. C. Pigou, "The Classical Stationary State," Econ. J., Dec. 1943, 53, 343-351.

_____, Lapses from Full Employment, London, 1945.

J. Robinson, The Accumulation of Capital, London, 1956.

P. A. Samuelson, "Sympathy from the Other Cambridge," The Economist, June 25, 1983, 19-21.

J.-B. Say, Traité d'économie politique, Paris, 1803; translated as s A Treatise on Political Economy by C. R. Prinsep, Philadelphia, 1830.

A. Smith, An Inquiry into the Nature and Causes of the Wealth of Nations, Edinburgh, 1776, "new" edition, Glasgow, 1805.

A. R. J. Turgot, "Réflexions sur la formation et la distribution des richesses," Ephémérides du citoyen, Nov. 1769-Jan. 1770, reprinted in E. Daire (ed.), Oeuvres de Turgot, Paris, 1844, translated as Reflections on the Formation and the Distribution of Riches, New York, 1922.